

ARGULUS OF MANCHUKUO

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ONE PLATE AND TWO TEXT-FIGURES

(Received October 2, 1938)

I propose to describe in the following pages two specimens of *Argulus* found by Dr. D. Miyadi during his surveying trip to Manchukuo last summer. The specimens were preserved in alcohol so perfectly that I can unhesitatingly identify the one as *Argulus japonicus* and the other as a new species which I name *Argulus mongolianus*.

1. *Argulus japonicus* Thiele, 1900

1 ♀. Host unknown. Total length 4 mm; abdomen 1 mm. Carapace oval, with lateral lobes bluntly pointed posteriorly and nearly covering coxae of the last swimming legs. Antero-lateral sinus present, though very indistinct. Abdomen incised nearly to centre; tips of abdominal lobes bluntly pointed.

Chitinous ribs of sucker 47-51. The last segment of endopodite of the first swimming leg slightly longer than the second segment. A bristle present on postero-ventral margin of coxa of the first swimming leg, and 7-8 bristles on basis of the last leg.

Body dark green, with violet brown pigments on dorsal side of oviduct and along ramifications of stomach; seminal receptacle brown. Locality: Mishan (密山—蓮花泡). 28/VII, '38.

2. *Argulus mongolianus* n. sp.

(Pl. 3 and Figs. 1, 2)

1 ♀. Host unknown. Total length 7.6 mm; abdomen 2.5 mm. Carapace round, as wide as long; antero-lateral sinus shallow, but distinct. Anterior portion in front of antero-lateral sinuses protruded strongly, and has a slight sinus along each lateral margin. Cephalic area of moderate size; thoracic area slightly wider. Tips of lateral lobes rounded, posterior sinus reaching almost as far as the centre of

carapace. Dorsal rib bifurcated anteriorly, the branches being convergent. Grooves on carapace rather faint except those bordering cephalic area. Respiratory areas like those of *Argulus japonicus*, but not marked with pigments. Anterior respiratory area small and triangular, posterior much larger. Compound eye rather small and situated much anteriorly. Postero-dorsal margin of each thoracic segment complexly corrugated as shown in Pl. 3, fig. C. Abdomen elliptical, longer than wide, with a deep anal sinus reaching almost its base. Tips of abdominal lobes bluntly pointed; caudal furcae basal. Seminal receptacles situated near base of abdomen; abdominal process indistinct.

Antennae of *japonicus*-type, armed with a pair of post-antennal spines. First segment of antennule with a spine on posterior margin; second with a knob on anterior margin and a spine on posterior near base; terminal portion hardly extending beyond hook. First segment of antenna provided with a knob-like spine on postero-basal portion with several bristles distal to this knob. Second segment also provided

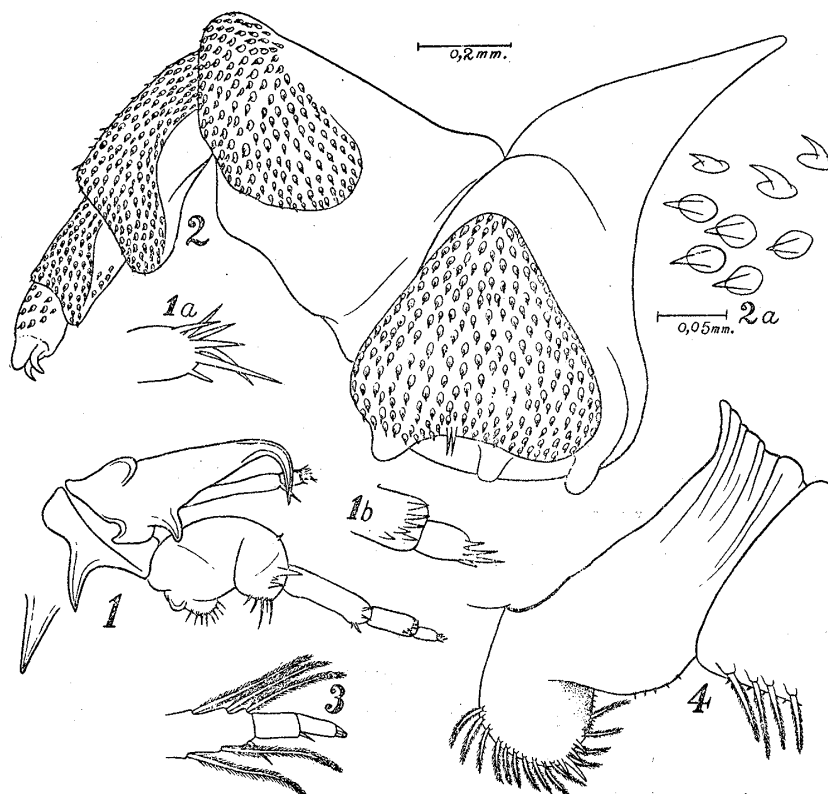


Fig. 1. *Argulus mongolianus*; 1 antennae, ventral. a—tip of terminal portion of antennule. b—tip of antenna. 2 maxilla, ventral. a—scales. 3 distal segments of endopodite of the first swimming leg. 4 postero-basal projection of coxa of the last swimming leg.

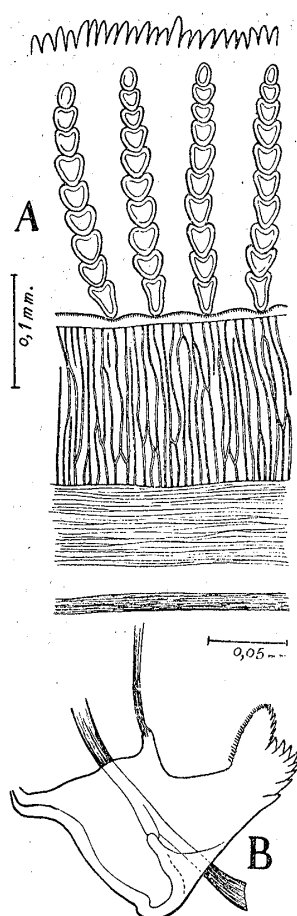


Fig. 2. *Argulus mongolicus*; A, chitinous ribs of sucker; B, mandible, ventral.

with bristles found at the distal end. Third segment twice as long as fourth which measures again twice the last segment. Sucker of moderate size, situated much anteriorly; chitinous ribs, 70–80 in number, each consisting of one elongated and 8–9 small heart-shaped segments. Mouth triangular, bordered with serrated margin; lower lip papillated and armed with a pair of minute spinules besides labial spines. Tip of mandibular blade finely serrated, with several teeth at the base on inner side. Basal segment of maxilla with an equilateral-triangular scaly area having two bristles at the middle of the base of the triangle, and with three blunt spines on posterior margin; the second segment armed with scales on antero-distal portion; three distal segments like those of other Eurasian species. Two pairs of post-maxillary spines present, though very small.

Rather long flagellum present on anterior two pairs of swimming legs with the tip reaching the base of each leg. First swimming leg with distal segments of endopodite equal in length, a bristle present on postero-ventral margin of coxa. All the other swimming legs are bare, except coxa and basis of the last leg. Postero-basal portion of coxa of the last leg projects conspicuously into a sort of lobe.

Body faintly yellowish, with slight dark green tint at centre of cephalic area, at bases of sucker and abdomen; thorax yellow, sprinkled with violet brown pigment spots on dorsal side, which are divided into three groups. Compound and nauplius eyes black; seminal receptacle dark green.

Locality: Dalai-nor. 15/VII, '38.

Remarks: The present species cannot be confused with any known Eurasian fresh-water *Argulus*. The more anterior situation of the compound eye and sucker than in other species, the front branches of the dorsal rib being convergent anteriorly, the elongated abdomen incised nearly to the base, as well as the equilateral-triangular scaly area on the basal segment of the maxilla may be noted as the characteristics of this new species. Besides these, there are some distinctive features in

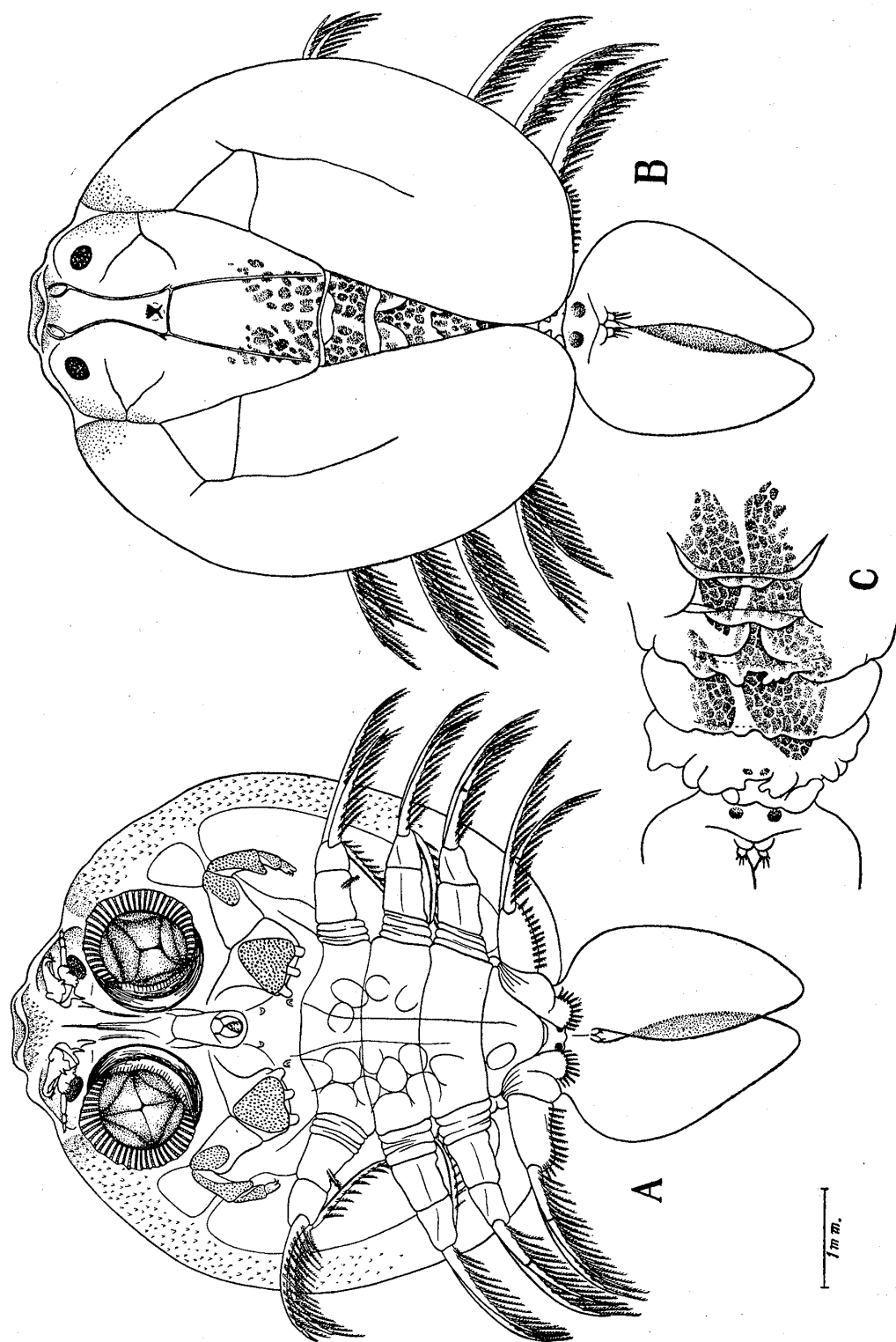
the armature of antennae and in the complex configuration of the postero-dorsal margin of the thoracic segments.

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EXPLANATION OF PLATE 3

- A *Argulus mongolianus* n. sp., ventral.
 B " " " , dorsal.
 C " " " , thoracic segments, dorsal.



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